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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/003,388	10/22/2001	Jorge H. Foglietta	1796JB.045649	5350

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EXAMINER

SMITH, DUANE

ART UNIT	PAPER NUMBER
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1724

DATE MAILED: 04/10/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/003,388	Applicant(s) FOGLIETTA ET AL.	
	Examiner Duane S. Smith	Art Unit 1724	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-45 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9, 19-29, 37-45 is/are rejected.
- 7) ☒ Claim(s) 10-18 and 30-36 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 October 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                     | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). ____.  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                            | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>4, 5</u> . | 6) <input type="checkbox"/> Other:  |

Applicant's claim for domestic priority under 35 U.S.C. 119(e) is acknowledged.

The drawings are objected to because the directional arrows of the flow paths seems inconsistent with the specification. Note for example stream 142b in Fig. 6a and stream 142b in Fig. 7A. Careful review is suggested to prevent confusion as to the stream flowpaths. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "30" has been used to designate both a vessel at page 16 line 10 and a mechanical refrigeration system at page 17 line 2. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "14" has been used to designate both a cold separator at page 13 line 5, page 18 line 9 and a cold adsorber at page 21 line 6. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description:

"10" in Fig. 1 as on page 12 line 16.

"29" In Fig. 6 as on page 20 line 3.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference sign(s) not mentioned in the description:

"29", "72a", "25", "27" as in Fig. 1.

"76" as in Fig. 4.

"78" as in Fig. 5.

A proposed drawing correction, corrected drawings, or amendment to the specification to add the reference sign(s) in the description, are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

The disclosure is objected to because of the following informalities: at page 12 line 1 "Figure 2" should read as –Figure 1—to be consistent with the specification and figures.

Appropriate correction is required.

Claims 19-24 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 19 it is unclear wherein the process such steps are occurring whether the tray is located in the absorber column or the fractionation column.

Claims 20-24 depend upon claim 19 are rejected as being dependent upon a rejected claim.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-9 ,25-29,37-38,40-45 are rejected under 35 U.S.C. 102(e) as being anticipated by Lee et al(US Patent No. 6,244,070).

Lee et al teach a process for separating heavier hydrocarbons from methane gas including the steps of partially condensing and separating an inlet gas(10) to produce a first vapor stream(28) and first liquid stream(22); expanding(26) at least a portion of the first liquid stream(22) to produce a first fractionation feed stream(22), supply to a fractionation column(24) the first fractionation feed stream(22) at the middle of the column(fig.1) and a second fractionation feed stream(88a), the fractionation column (24)having mass transfer stages(col. 6 lines 9-10) producing an overhead vapor stream(58) having mostly methane(Table I) and fractionation bottom stream(56) having mostly higher hydrocarbons(Table I) ; expanding(84) a portion of the first vapor stream(28) to form an expanded vapor stream; supplying to an adsorber(82) having

Art Unit: 1724

mass transfer stages(col. 3 line 50) the expanded vapor stream; the absorber(82) producing an adsorber bottom stream(88) and an adsorber overhead stream(90), the adsorber(col. 6 lines 50 and 7) having a pressure greater than the fractionation column, compressing(120) at least a portion of the fractionation overhead vapor stream to at least the adsorber pressure(col. 11 lines 35-40) to produce at least a compressed second vapor stream(86a), at least partially condensing(52) the compressed second vapor stream in a heat exchanger(52) to produce the absorber feed stream(86b). The absorber pressure being at least about 500 psia(col. 6 line 50) and the pressure differential being at least 50 psia to 350 psia(col. 6 line 7).

Claims 10-18 and 30-36 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 19-24 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

The following is an examiner's statement of reasons for allowance: None of the prior art of record teach nor suggest at least the claimed features of separating the condensed fractionation overhead stream to produce a second vapor stream and a fractionation reflux stream and supply the fractionation column with the fractionation reflux stream with the rest of the recited steps of instant claim 10 in combination with the features of the independent claim. None of the prior art of record teach nor suggest the claimed features of the adsorber overhead stream being returned to an internal

Art Unit: 1724

condenser of the fractionation column in combination with the features of the independent claim. None of the prior art of record teach nor suggest the claimed features of the supplying the adsorber column with a second adsorber stream in combination with the other recited features of claim 19 in combination with the independent claim. Nor the apparatus for practicing the methods as instant claim 30 and 34 in combination with the features of the independent apparatus claim.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Paradowski, Cicalese, Rowles, McCue Jr., Nagel et al, Kniel, and Hammond et al disclose similar methods and apparatus.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Duane S. Smith whose telephone number is 703-308-3792. The examiner can normally be reached on 8:30-6:00 M-TH.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Dunn can be reached on 703-308-3318. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-7718 for regular communications and 703-305-3599 for After Final communications.

Application/Control Number: 10/003,388

Page 7

Art Unit: 1724

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0651.

Duane S. Smith  
Primary Examiner  
Art Unit 1724

Handwritten signature of Duane S. Smith, dated 4-4-03.

dss  
April 4, 2003